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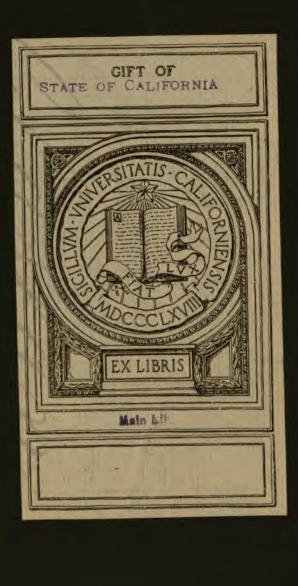
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### SPECIAL MESSAGE

OF GOVERNOR

# GEORGE C. PERKINS,

1237

TO THE

LEGISLATURE OF THE STATE OF CALIFORNIA,

Twenty-Fourth Session.



#### SACRAMENTO:

STATE OFFICE::: J. D. YOUNG, SUPT. STATE PRINTING. 1881.



California, Lorena 1871-1883 (Ge. Serkin.

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TO VIVI AMASOTIAS

#### SPECIAL MESSAGE.

To the Senate and Assembly of the State of California:

In my annual message to your honorable bodies I stated my intention to treat the subject of drainage in a special communication. The magnitude of the interests at stake, and the complexity of the considerations involved, render it impossible to deal curtly with the topic. When, as here, the very existence of one of the most fertile portions of the State is imperiled; when a destruction of property, aggregating immense amounts, is threatened; when it is made apparent that a failure to legislate effectively must entail the complete abolition of the State's most important waterways, thus retarding progress and settlement over wide areas, through the consequent increase of transportation charges; when, also, there is involved the fate of an extensive productive interest which adds yearly between \$10,000,000 and \$15,000,000 to the capital of the community, it has seemed to me that it would be a reproach on my administration did I not, to the best of my ability, express my opinion of the gravity and urgency of the situation, and give my reasons for believing it the duty of your honorable bodies to take the whole question under earnest deliberation.

The Act to promote drainage, which was passed by your predecessors in office, received my signature in April, 1880. As the reasons which induced me to sign that measure have all been fortified and confirmed by subsequent investigation, and as those reasons embrace the foundation of the whole question, I propose to state them here.

Under the law of March, 1878, organizing the office of State Engineer, provision was made for examining the condition of the rivers in connection with the deposits of mining debris in their channels, and also the effect of these deposits of debris upon the valley lands during floods. An appropriation of \$100,000 was made to carry this law into effect, and the result was the accumulation of a mass of very important information, from which, as embodied in the reports already laid before you, and from the subsequent investigations made under the Drainage Act, the principal facts I am about to state are derived.

It is already known to your honorable bodies that considerable injury has been done to farming lands by debris from the hydraulic mines. It is also known to you that some steps have been taken to remedy the evils in operation. My purpose here will be to treat this subject as fully as the available data permit, and to consider: (1) the nature and extent of the injury done and threatened; (2) the value of the property directly and indirectly menaced; (3) the results to the State of the threatened destruction of its principal waterways; (4) the importance of the hydraulic mining interest, directly and indirectly: (5) the practicability of a remedy, its conditions, and its

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implications; (6) the futility of merely stopping hydraulic mining; (7) the relations and obligations of the State to the question; (8) the necessity of some sustained engineering treatment of the rivers under any circumstances. These divisions of the subject I shall treat as

concisely as possible in their turn.

Of the nature and extent of the injuries inflicted, you have already been informed somewhat fully by the reports of the State and consulting engineers. The damage done by hydraulic mining consists in: (1) direct destruction of agricultural and other lands; (2) indirect damage to such land; (3) direct injury to the rivers and streams; (4) indirect damage to the rivers and streams. The most serious direct damage to property has thus far occurred on the American, Bear, and Yuba Rivers. The nature of the damage is a practical burial of large areas under the mining detritus, or "slickens," and sand. The property so buried is, in fact, so completely deprived of agricultural value that, in the opinion of competent judges, it can under the most favorable circumstances, be fit for nothing but raising swamp timber for from fifteen to thirty years. As to the extent of the damage done in this way already, the State Engineer has reported the great injury of 43,546 acres of farming land, rated at a present probable valuation of \$2,728,300 for the land alone. He further informs me that since making the above report (in January, 1880), he has become satisfied that he under-estimated the amount of this loss, and he now believes that the damage or destruction, which may be classed as direct in the loss of agricultural property, may with safety be estimated as follows:

Landed property	\$4,000,000 2,000,000
Total	\$6,000,000

The indirect damage to property is most apparent along the main streams—the Feather River and the upper and lower Sacramento River. For the most part the difference between direct and indirect damage to property is more in the degree of harm inflicted than in its character. This, however, is not invariably the case. The injuries resulting from hydraulic mining are, in truth, so extensive that it requires both a comprehensive and careful survey to embrace them all. The settlers along the lower Sacramento have, for example, expended millions of dollars during the past fifteen years in attempting to reclaim swamp and overflowed lands. The failure which has followed these courageous and spirited efforts, must be ascribed to the constant operation of those natural forces which the processes of hydraulic mining put in motion, and which, from year to year, have been counteracting and nullifying the most determined attempts at reclamation. As the State sold the swamp lands on the condition that they should be reclaimed, it must be difficult to show that it is not under any obligation to remove obstacles which render the fulfillment of the conditions thus imposed by it impracticable.

The indirect injuries which may be traced without any doubt or difficulty to hydraulic mining are, however, very extensive. In all these cases the future can be predicted from the past. On the one hand are lands already covered with the flood of sand and debris. On the other hand are lands threatened with this flood. And the flood is continually advancing. The low lands of the whole Sacra-

mento Valley are in fact threatened with unavoidable destruction. That is to say, that an area inclosing from twelve to fourteen hundred square miles of fertile territory is indirectly damaged, and is

menaced with ultimate destruction.

Nor is this the whole of the situation, for the injury done to the Sacramento Valley extends, by a reflex action, to the low lands of the San Joaquin, and to the lands about the upper bays by a direct movement. It may, therefore, be said, without exaggeration, that the indirect damage actually embraces an area extending from Oroville

and Chico to Benicia, on the Straits of Carquinez.

So far I have only considered the injury done by the actual and prospective destruction of the fertility of arable lands. It is, however, impossible to confine the consideration of this branch of the subject to that channel. It is necessary to bear in mind that the destruction of the navigability of the Sacramento River is involved. This would deprive the whole of Northern California of competition in transportation. The wheat crop alone of that region may be estimated at 500,000 tons. It may also be fairly calculated that the removal of competition would result in a rise of freight rates to the extent of \$2 per ton. Thus, then, an additional tax of \$1,000,000 a year on the movement of the harvest alone is involved in this ques-

tion as concerns Northern California.

I have endeavored to ascertain, by reference to the assessment rolls and the report of the Board of Equalization, as well as from other sources, the amount of values menaced directly and indirectly by the effects of hydraulic mining. I have above stated the opinions of the State Engineer as to the extent of actual destruction already accomplished. He puts it at \$6,000,000. Taking the Counties of Colusa, Placer, Sacramento, Solano, Sutter, Yolo, Yuba, Butte, and Tehama, and estimating the assessed value of real estate other than town lots and the improvements, and of the town lots and their improvements, and making what seems a sufficient deduction from the aggregate, I have arrived at the conclusion that the property in these counties threatened with partial or complete destruction cannot properly be placed at a lower estimate than \$60,000,000. Here, then, is \$6,000,000 already destroyed, and \$60,000,000 menaced with destruction. Nor must it be forgotten that this menace is not a mere possibility, but as certain as the march of a glacier down a mountain pass. If remedial action is not taken, it will ensue, beyond all question; and when destruction comes in the shape of winter floods, it is very apt to reach even greater lengths than the most careful anticipation could have predicted or allowed for.

In considering the next question, namely, the results to the State of the destruction of its principal waterways, perhaps it is unnecessary to do more than refer to the voluminous evidence furnished by the State Engineer and the consulting engineers in support of the proposition that these waterways are in danger of destruction. The testimony of these scientific men is to the effect that, unless sustained and systematic treatment is applied to the rivers, they will shortly cease to be navigable, and that both the Feather and Sacramento Rivers are now in a condition in which an unusual flood might cause them to abandon their present channels, and spread themselves abroad through the low lands between Knight's Landing or Grey's Bend and Suisun Bay, ruining the country everywhere, and changing the

very face of the State.

Regarding this position as demonstrated, it becomes necessary to consider the effects of this change upon the State. It has been shown that the northern region would be very seriously burdened by the removal of the means of competition which the rivers afford. It must further be realized that this injury would affect a present population of at least 150,000, of whom one third would be directly and two thirds indirectly concerned. The effect upon the value of land cannot be ignored, either. It is evident, that if, through any cause, the cost of transportation is raised \$2 a ton, the products of the region so affected must, by this change, be put at an increased disadvantage equal to the removal of their lands from a market a distance represented by the enhanced ratio of transportation. Their lands are in fact thereby put as much further from the market as \$2 will carry a ton of wheat, and the consequence must be to lower the value of land exposed to such an import. It is well known that the value of agricultural land, given an average fertility, depends upon the ability of the cultivator to carry his products to market at a profit. Around every great market may be drawn a circle which, at a greater or less distance, incloses the area of possible profitable production. Beyond that circle no natural fertility of soil will compensate for the distance from market. Within that circle all production is profitable. Now it is clear that \$2 a ton might easily make the difference between possibility and impossibility in transportation, for it might represent the difference between profit and loss. If it operated as a hindrance to the shipment of grain, it would of course deprive all the land exposed to its influence of value for the production of cereals; and in California that would probably mean the deprivation of all value. I have endeavored to reach an approximate estimate of the loss of values to be apprehended in this direction from the destruction of the principal waterways, and I find that it cannot fairly be stated at less than \$100,000,000. Large as this amount may seem at the first glance, I am satisfied that no one can go carefully and fully into the considerations involved without being convinced that I have sought rather to under than overstate the probabilities.

(It might appear that the only rational inference from the facts thus far given would be the desirability of putting a stop to hydraulic mining. It, therefore, is proper at this point to make some observations on the value and importance of that interest. Hydraulic mining has been carried on in this State for nearly thirty years. The present annual output of the hydraulic mines is estimated at from \$12,000,000 to \$14,000,000. It is, therefore, apparent that an estimate of \$150,000,000 for the whole period of their working is not extrava-It is equally clear, that while no accurate estimate of the future output can be made, it is safe to assume that it will be larger than it has been in the past, since the extent of gravel-bearing claims remaining unworked is practically unlimited, and since many very extensive workings have either just been opened or are not yet opened so as to be largely productive. Enough is known to make it plain that the hydraulic mines have contributed greatly to the prosperity of the State, and will contribute still more largely in the future if suffered to proceed. A very considerable population is supported by these mines. I estimate it at 30,000; and the indirect support is very much more extensive. The counties in which the principal hydraulic mines are situated may be said to depend almost entirely upon the mining industry. All values in those counties are therefore dependent upon the prosperity of this interest. What this involves may be perceived by reference to the comprehensive decline of values in Virginia City, consequent upon the depreciation of the mines on the Comstock lode. In that case the mining population was thinned out, the value of real property fell to panic prices, and the general effect upon the prosperity of the community was as disastrous as though every man in the city had been directly interested Similar results must always follow where the intimacy of the relations between the various interests is as great as in the mining counties of California. The suppression of hydraulic mining, therefore, would in all probability be productive of a general collapse throughout this region. Not only would there ensue a positive and direct loss to the State in the cessation of auriferous production, but the entire industries, commercial activities, and general civilization of the mining counties would be virtually destroyed; and it must be apprehended that the tax-paying as well as the wealth-producing capacities of those counties would be paralyzed.

I have endeavored, as much as possible, to confine my observations to matters of fact and legitimate inference, but it is apparent that a great deal remains to be said on the subject of equities; for the discussion of which this is not the most proper place. (It is nevertheless evident that the hydraulic mining interest is an important one.) It may be said, as regards its annual output, to represent a fixed capital of \$100,000,000; and directly and indirectly it affords support to a considerable population. (Even the farmers in the valley who occupy lands on the verge of the mineral area owe a portion of their prosperity to these mines, which create a brisk demand for their produce, and a demand the loss of which would be severely felt. Clearly, therefore, it must be a very serious business to put a stop, by legislation, to this great industry; and it seems impossible that those who undertake to study the subject should conclude such a course to be necessary, until it had been demonstrated that it was impracticable to save the rivers and the farms and cities without sacrificing the

mines.

The preliminary and the late surveys of the engineering department have been devoted to the elucidation of this problem. engineers were required to ascertain the extent of the injury, present and prospective, and whether remedial measures were available. Their reports have shown: (1) that the extent and gravity of the damage and menace are far greater than has been commonly supposed; (2) that it was possible to counteract the ill effects of hydraulic mining by a systematic treatment of the rivers; (3) that such a systematic treatment of the rivers was necessary in any case, since it would be impossible to meet the exigencies of the situation by merely stopping hydraulic mining. It does not come within my province to deal with the hydrostatic laws and principles by which the engineers explain the condition of the rivers. It is sufficient to state that the most formidable danger to the lowlands is due to the deposit in the mountain streams and tributaries of enormous quantities of heavy sand, which is being washed down lower every year. The deposit of this sand must continue until the entire Sacramento Valley is covered and destroyed, even though hydraulic mining should be stopped at once, unless remedial measures are adopted. In fact, it may be asserted that the stoppage of hydraulic mining in the present stage of the debris evil would produce no alleviation

whatever. There is a mass of mining debris now collected in the cañons of the mountains sufficient to cover the Sacramento Valley completely a couple of feet deep; and this matter will continue to be washed down every winter until the beds of the river are entirely choked, and until the destruction inflicted upon the valley agricult-

ural lands has become past relief and reparation.

It is, however, practicable, in the opinion of the State and consulting engineers, to deal with the situation, and in so doing to at once save the rivers and the mines. Whether it is true statesmanship to accept this proposition seems to depend upon consideration of the relative cost of reclamation, and value of the property to be reclaimed. In other words, it requires to be ascertained whether the State can better afford to sustain the cost of reclamation than to bear the losses resulting from the destruction of the property which must follow—either (1) the stoppage of hydraulic mining, or (2) the abandonment of the rivers and agricultural lands and valley towns to the flow of

the advancing wave of debris.

I have endeavored to give you some adequate idea of the values represented on both sides. It has been shown that if the flow of debris is unchecked, to a positive loss of \$6,000,000 in land must succeed a further loss of \$60,000,000 in real property; that to this must be added at least \$100,000,000 for destruction of waterways, and fully \$1,000,000 a year in freights. On the other hand it has been shown that the hydraulic mines represent a fixed capital of \$100,000,000; that they support a large population; that they constitute the backbone of the commerce and industry of the mining counties, and that their suspension would necessarily involve the decline of all values throughout those counties, and the certain decay of that region of the State. It would appear from these considerations that the burden placed upon the State would have to be very heavy to outweigh the obvious desirability of avoiding the losses with which the commonwealth is threatened whether hydraulic mining is or is not suspended.

The surveys of the engineers resulted in ascertaining the practicability of remedial measures, but at the same time showed that the subject was too extensive to be dealt with locally. It was particularly insisted on by the engineers that sustained and systematic treatment of the rivers must be undertaken, or that it would be useless to attempt anything. While, therefore, they held out the encouraging consideration that by such a systematic treatment, the condition of the rivers might be made even better than it had ever been, they contended that nothing less comprehensive than the methods they proposed would be adequate. It is important to observe that Captain James B. Eads, the distinguished engineer of the Mississippi mouths, who was fortunately secured by me for consultation, and whose report has been placed in your hands, was especially emphatic on this head. In the report referred to, he says: "It is very certain that unless a proper plan of improvement be adopted, there will be still greater inundations, and more extensive areas of valuable land will be covered with this detritus. Navigation must likewise become more difficult; and in time that of Suisun Bay and the Bay of San Francisco will be imperiled. No improvement is worth considering which will not result in permanent relief. and no improvement can afford such relief unless it be consistent with certain well known natural laws controlling the action of all sediment-bearing rivers." He concludes his report in these significant words: "If the entire system be properly executed and fully completed as proposed, I have no hesitation in asserting that the results will be most gratifying and remunerative." In common with his colleagues, Captain Eads holds the adoption of this or some other comprehensive system to be necessary. On the point of sustained and systematic action, in fact, there is no difference of opinion among

the scientific men who have examined the subject.

In estimating the probable results of any successful plan of drainage, it became necessary to take into consideration not only the losses and dangers to be avoided, but the benefits to be gained. It was evident that the works which scoured out the river channels, and enabled them to carry their flood volume without inundating the country through which they flowed, would reclaim all the swamp and overflowed lands along the lower Sacramento. A rough estimate of the values thus created by the carrying out of such a system justifies the belief that at least \$70,000,000 would in this way be

added to the assessment rolls.

Against all these considerations was to be placed the cost of the proposed works. It was not possible to arrive at a clear estimate of this expenditure, but it was believed by the engineers that it could not exceed \$10,000,000, and that it might not exceed \$5,000,000. Taking the larger figure for comparison, it at once appears that when measured by the magnitude of the interests at stake on either side, such an expenditure must be regarded as insignificant, nor can there, after making this calculation, remain a doubt as to the expediency of prefering remedial measures, framed with a view to the preservation of the mining interest, to that let-alone policy which it is evident would entail the most widespread disasters and injuries upon the commonwealth.

Insignificant as the aggregate cost of the works may appear, however, when contrasted with the values imperiled, it is unquestionably far too onerous an undertaking to be borne by any section or locality. This brings me to the Drainage Act, which was drawn, I believe, as a compromise measure, but which in its principles appears to meet the logical and equitable requirements of the situation quite closely. (It was attempted in this bill to assess a benefit assessment as justly as possible upon the districts to be directly aided; the hydraulic miners were called upon for extra contributions, as seemed proper under the circumstances; and a single light tax of five cents on the hundred dollars was made general. I signed that Act in the belief that its principles were just and sound, and I have seen no reason to change

that belief since the law went into operation.

The justice of a general tax for such a purpose appears to me to be thoroughly demonstrated by the existing relations between the State and the Federal Government, and by various legislative methods of apportioning taxation in the State economy which are based on the same doctrine. The principle of mutuality of interest between the citizens of one commonwealth has been adopted in its very broadest interpretation in the relations between the States and the Federal Whenever a State needs some internal improvement which it cannot compass from its own resources it appeals to Congress, and the latter rarely fails to concede what is demanded. San Luis Obispo, Los Angeles, San Diego, and Alameda Counties, in this State, are now petitioners for appropriations which can only be justi-

fied or granted by applying the principle of community interest underlying the measure under consideration. To repudiate that principle is to deny the justice of claims now being urged before Congress on behalf of these improvements. The theory upon which Congress proceeds in those cases differs in no degree from that which is applicable here. For mutual defense, for mutual protection, for mutual advantage, for mutual convenience, the nation helps the State. Taxation is general. The revenues collected from the entire Union, however, are liable to be employed at any time upon local improvements. The taxpayer who resides in the heart of Illinois or Minnesota is made to contribute to the erection of lighthouses upon the coast of Maine, or the construction of breakwaters and harbor protection and improvements on the coast of California. It is necessary that this exchange of aid should be made; but there can be no reason why what is recognized as indispensable between the different States and the Federal Government should be rejected as inapplicable

when the people of a single State are concerned.

This principle is acted upon in our school law, as has been too frequently demonstrated, to need further illustration. It is, in fact, a principle altogether necessary to the progress and prosperity of States, and without which all advances toward a higher condition of civilization would be slow and painful. Of course, the fact that the State undertakes a work of this kind in no way interferes with whatever appeals may be addressed to Congress. (I am of opinion that California has a very equitable claim upon the General Government for aid in this connection, and I do not believe that Congress will hesitate to recognize it. Such governmental aid should at once be sought and earnestly insisted upon. (The General Government sold the mineral lands to the miners and the agricultural lands to the farmers, and received due compensation therefor. It sold the mineral lands with a full knowledge of the fact that the beds of the streams were indispensable channels for the tailings created by mining opera-Since the mineral lands were sold for the express purpose of mining, and since the property so purchased cannot be profitably worked without great injury to the valleys and rivers of the State, our people believe that in equity the government owes a large contribution to the cost of remedies for the injury inflicted.) The precedents for liberal appropriations to aid us in the solution of this problem are not wanting. The government expended \$5,000,000 in the improvement of the navigation of the mouth of the Mississippi River, and the concession was made for considerations which find complete analogy and parallel here. The gold product of our mines flow into the channels of the world's commerce, and the auriferous deposits of our mountains are the treasures of the entire people.) The preservation of the navigability of our river system should be the charge of the nation, and no instance can be cited where the General Government has repudiated its obligation in this connection. The navigation of the inland waters of this State, and the community of interest inherent in the production of precious metals, sustain relations to the general welfare, establishing a claim upon the governmental protection equal in equity and of greater magnitude in importance than the improvement of harbors upon our coast. In this view I look hopefully for assistance from Congress.

The relations and obligations of the State in this connection must be considered very seriously. The principle of community of interest, which underlies and pervades the whole economic system of American government, cannot be ignored in a case of this magnitude, nor should there, on the other hand, be any doubt in the public mind as to the justice of its application. To prove the interest of the State in the matter, it will probably suffice to demonstrate that it has much to gain by the successful cure of the debris evil, and much to lose by the failure of all attempts in that direction. The considerations already advanced may be supposed to look toward these con-clusions, but it may be useful to fortify them with some further arguments. As regards the question of gain to the State, it is clear that such a rehabilitation of the principal waterways as will not only remove all danger of further disastrous inundations from the upper Sacramento Valley, but will reclaim the swamp lands on the lower Sacramento, must add very largely to the taxable property of the community, induce settlement and cultivation, and promote the growth and prosperity, first, of the northern portion of the State; and second, of the whole State. To what extent these benefits would reach, has been shown already in this message. Certainly the advantages to be anticipated by the State are sufficiently substantial. On the other hand, should the Legislature determine to refuse all further aid to the engineering works proposed, and should the debris consequently be permitted to flow on without interruption, we have the judgment of the engineers to the effect that the Sacramento Valley will, at no distant date, be rendered uninhabitable; that all the lowlands embraced within it will be destroyed; that the rivers will cease to be navigable; that the Cities of Marysville, Sacramento, and Colusa. (the latter by floods), together with the towns and villages between and around them, will be overwhelmed; and that for all practical purposes of producing wealth, and supporting the government, this section of the State will be blotted out.

I think it must be admitted that the relations between the various parts of the State are too intimate to permit of the decline of one without reactionary effect upon the fortunes of the others. Neither can, in fact, afford to seek a policy of isolation. And it is not less true that there are here concerned obligations as well as relations. Before the Drainage Act was enacted, issue had been joined in the Courts between the miners and the farmers. The latter sought the stoppage of hydraulic processes. Had they been successful in this litigation, the problem would not have been solved for the State; but if hydraulic mining had been stopped, the mines would have been eliminated as a taxpaying factor, and whatever future expense might have been incurred would have had to be borne by the rest of the The farmers, however, have not relinquished their community. common-law rights, and they must defend themselves if the State does not defend them. The State, in undertaking, for considerations of community interest, to compromise the issue between the contending parties, laid itself under obligation to afford to the farmers that protection which it had persuaded them to cease seeking through the Courts. But the case of the farmers who have been directly injured, or threatened by the debris, is not the only one in point. already referred to the fact that when the State sold its swamp lands it made their reclamation a prime condition of purchase. Now, when a State imposes such a condition, it binds itself, by direct implication, to do nothing which can hinder or prevent the fulfillment of the conditions by the purchaser. And it is clear, that in the present case the State has not acted up to this requirement, since it has permitted the hydraulic miners so to treat the rivers that all plans of reclamation have proved futile. There can be no doubt of the responsibility of the hydraulic miners for that condition of the rivers which has caused the capital of our swamp land cultivators to be wasted. Nor can there be any more question as to the concern of the State in the general situation. It cannot, it appears to me, exercise the community right of effecting a compromise between the conflicting interests, and then evade the concessions which are required for the success of that compromise. That would be to recognize a principle of duty where it affected the relations of others to oneself, but to repudiate it when it affected one's own relations to others.

I have said that the general principles of the Drainage Act appeared to me so sound as to justify my approval of that measure. The manner in which the boundaries of Drainage District Number One have been aligned by the Commissioners, having been the subject of some criticism and apparent misunderstanding, it may be proper for me to recall the fact that the law provides that each district "shall include a territory drained by one natural system of drainage." To have followed this literally would have compelled the inclusion of the whole area which drains into the Sacramento Valley, and which by its waters certainly contributes to the damage and complicates the problem. To have done this, however, would have so increased the difficulties of defining rational boundaries that these might have seemed the mere arbitrary caprices of the Commissioners, rather than the carefully ascertained limits of a natural district. It is possible that the true principle would have been to tax the whole area alike; but the measure was a compromise, and it was necessary to observe that principle. Some portions of the valley, for example, are more directly interested in navigation than other portions. For this reason it was considered best to exclude the extreme upper parts of the valley, and for the same reason Lake County, though it really drains through the Coast Range into the Yolo Basin, was omitted.

I come now to the question of the necessity for some sustained and systematic treatment of the rivers. I am not prepared to express an opinion upon the remedial measures which are proposed by the engineers. It is for you to determine what course shall be taken in regard to them, and it is for you to judge whether they meet the requirements of the situation. But I consider it my duty to point out, to the best of my ability, the need which appears to exist—the imperative need, I may say—for some scientific and comprehensive mode of treatment. The reports of the State Engineer, and those of the consulting engineers, Captain Eads and Colonel Mendell, contain many serious and even startling expressions in this connection. They concur in declaring that there must be a well devised, carefully planned, all-embracing system of remedial action, and that nothing less than this will arrest the very grave dangers which menace the State. They tell us, as the result of their elaborate researches, that the lower river channels are raised by the deposits of sand in them; that the upper river tributaries are given a torrential character by the ever-increasing steepness of grade imparted to them in the same way; that consequently they bring down their flood-waters more swiftly and in greater volume than ever; and that the lower river channels, being choked with sand, are less able than ever to receive and carry this increased volume of water. They tell us that while

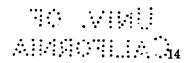


through these agencies the flood-height is being raised every year, and the difficulty of guarding against disastrous inundations correspondingly increased, the stoppage of the hydraulic mines would neither remove this great evil, nor abate it even for the moment in an appreciable degree. They say that the canons of El Dorado, Placer, Nevada, Sierra, Yuba, and Plumas Counties are vast reservoirs of sand, which has been deposited in them by hydraulic mining operations during a period extending from 1854 to the present time. This sand—heavy quartz detritus—is, they state, coming down gradually but slowly into the valleys. The river channels are already filled with it, and now the main body is being slowly pushed over into the valleys. Its progress during the first part of its journey attracted no attention. It had been flowing for five years before any harm was anticipated from it. But now it has passed the region where it could do no injury, and it is pressing forward. The engineers affirm that if this heavy sand is allowed to cover the valley lands their destruction will be absolute. They say, further, that even if the hydraulic mines are stopped it will continue to flow for years. And they aver that the damage already done and in progress is so great that only a thoroughly organized plan of operations can save the valleys from this irruption, and redeem them for the uses of civilization.

If the engineers are thus positive as regards the reality and extent of the dangers and injuries to be feared, they are, however, equally assured as to the practicability of applying remedies. They are confident that, though no complete cure for the damage already done can be obtained save through the healing hand of time, it is quite possible to prevent the further extension of direct damage, and to arrest completely the extension of indirect damage in the future. The large rivers, they hold, can be made better than they ever were, by proper treatment, but it must be systematic and continued.

Whether, therefore, you acquiesce in the conclusions of the State and consulting engineers as to the merits of the particular methods which they recommend, or whether you conclude that some other plan would be preferable, I trust it may appear as clear to you as it does to me that the question is one which the State must undertake to deal with, promtly, resolutely, and intelligently. It is not necessary to point out to you that the conclusions of the engineers rest upon actual investigation into the entire range of phenomena concerned; that they are governed by professional experience of what has been accomplished elsewhere in similar directions; and that there is, all things considered, quite a remarkable unanimity of view among these scientific men in regard to the general principles to be adopted. These are considerations which will doubtless occur to you naturally, and which will be given due weight. (The main duty of the hour—the relief of the State from the perils with which it is now threatened by the results of hydraulic mining—is my chief concern in addressing you.

I can conceive no occasion for legislative action in which the interests of the State could be more expressly involved than here. I have endeavored to show you that I cannot regard the subject as one of merely local concernment, nor indeed do I think that a careful examination of it in all its bearings can lead any candid inquirer to a narrower conclusion. You are in fact called upon in this case to decide the fate of the Sacramento Valley directly, and of very much



wider interests indirectly. You have seen that the property values concerned on all sides are very great. The question is one which involves hundreds of millions of dollars, and the prosperity of hundreds of thousands of people. It is impossible to deal lightly with so grave and far-reaching a matter, and I shall, therefore, not seek to excuse the length of this message. I have endeavored to treat a great question fittingly: to lay before you, as succinctly yet as clearly as possible, the many and various considerations and circumstances pertaining to it; to advance such facts as were best calculated to convince you of the importance of the whole subject; to explain, in outline, the purpose and aim of the legislation which has been already had in the premises; and to bring together in a comparatively narrow compass the salient points of the scientific verdict which has been rendered on the situation. For the accomplishment of this task I have called to my aid the counsels of the engineers, and the assistance of citizens whose study of the questions involved entitle their opinions and conclusions to consideration.

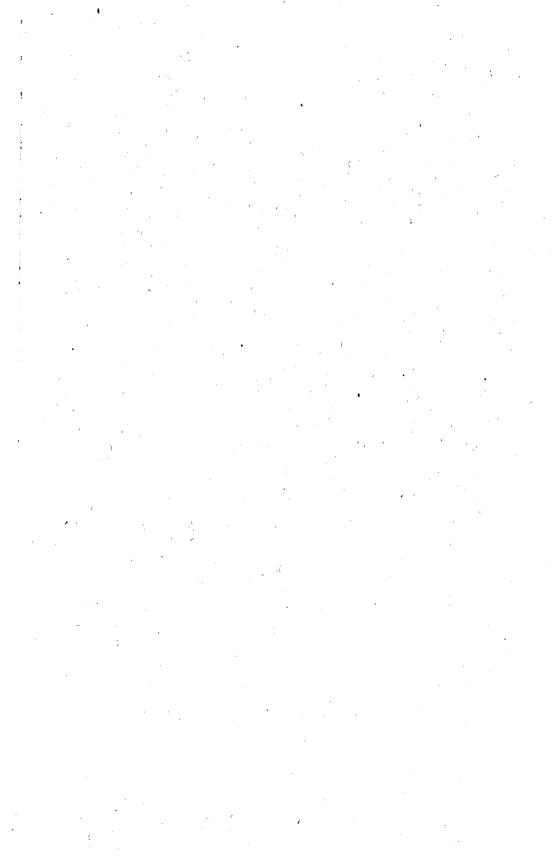
I will conclude by expressing the hope that your honorable bodies may so appreciate the urgency and gravity of the emergency as to adopt legislation which will meet the utmost requirements of the case; which will provide for the prosecution of such remedial works as shall restore the carrying capacity and navigability of our waterways; deliver the farmers of the upper Sacramento from destruction by detritus, and the farmers of the lower Sacramento from destruction by floods; enable our rivers to carry their highest flood-waters without injury or danger to the country and the cities past which they flow; preserve the navigability of our river system as highways of commerce; remove all apprehensions concerning the Bay of Suisun and the Harbor of San Francisco; and at the same time permit the continuance of those mining operations which add so largely to the wealth of the community and support so considerable a percentage of the population.

munity and support so considerable a percentage of the population. By this review of facts and inferences I have sought to bring clearly before your minds the magnitude of the problems the drainage bill presented when placed before the Executive for approval. To have arrested the experiments proposed by the bill would have deprived the people of the State of the right to apply an immediate remedy for the great evils complained of. To have done this without offering other plan or suggestion as to remedies from threatened disaster or succor from impending danger, would have been the assumption of a high responsibility. As representatives of the people the responsibility now rests with you, and without recommendation the whole subject is committed to you, with confidence in your wisdom, faith in your willingness to give it due and just consideration, and hope in your ability to devise measures of relief which will meet adequately the requirements of the case.

GEORGE C. PERKINS.







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